



Dworshak Fisheries Complex

Monthly Activity Report



August Highlights

Dworshak

SST BY16 - 2,186,438

SST BY16 Nursery-
309,363

SCS BY15 - 2,271,478

COS BY 15 - 345,226

Kooskia

BY 15 Chinook - 693,418

BY 16 Chinook -
1,001,224 eggs

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U.S. Fish & Wildlife Service, Region 1

Managers Message - Steve Rodgers



Credit: Doug Nemeth

New Project Leader for IFWCO!

Many of you may have noticed a new face in our morning staff meeting – Doug Nemeth. He is the new Project Leader for the Idaho Fish and Wildlife Conservation Office (IFWCO), replacing Howard Burge, who retired back in 2012! As is customary, when Doug was appointed I sent out an email introducing him to the region. Some of you may not have seen that email, so I thought reposting it here would help you get to know him.

Doug has a Master's of Science degree in Biology from Ball State University, after receiving his Bachelors of Science degree in Fisheries Science at Oregon State. He has a host of fishery publications generated during his education and throughout his extensive career.

Doug has over thirty years of experience in fish and wildlife research and management throughout the United States. He's worked for the Indiana Division of Fish and Wildlife, the University of Maryland, the Oregon Department of Fish and Wildlife, Idaho's Department of Fish and Game, the Florida Fish and Wildlife Conservation Commission, the Navy, and for the U.S. Fish and Wildlife Service as a fishery biologist in California. His diverse background includes more than sixteen years focused on

Pacific salmon in western Oregon, northern California, and throughout the Salmon and Clearwater River drainages here in Idaho. Doug knows many of the people who manage fisheries in the Clearwater Basin, and will utilize those professional relationships in leading the IFWCO.

More recently, Doug has been employed by the U.S. Navy as the Natural Resource Manager for Navy Region Southeast. He's had oversight over U.S. Navy properties from Texas to South Carolina to Florida; and including Puerto Rico and Guantanamo Bay. In this capacity he's managed all fish and wildlife, forestry, and agricultural activities on 150,000 acres of naval property. Ask Doug about the challenge of getting the Navy air operations leadership to come to the table to discuss ways to maintain wildlife populations and habitat while still making the airfields safe for planes and pilots. Doug found a creative way to solve the problem...a great example of the collaborative problem solving skills he'll bring to this position.

Doug and his wife Linda have been together for over 30 years. They have two sons, Jacob and Zach. Doug is an avid angler and hunter, so he's picked the right place to live. He also enjoys acting; and has played Felix Unger (The Odd Couple), Tom Wingfield (The Glass Menagerie), and Ricky Roma (Glengarry Glen Ross), among others.

Please stop by and say hello to Doug and make him feel welcome. He's excited to be a part of the IFWCO and our Complex, and is already becoming immersed in all the good work that office does. Welcome to the team Doug...we're glad you are here.

Dworshak Hatchery Production - Izbicki, Sommer, Bisbee**Dworshak Stock - Spring Chinook Salmon (SCS)*****Brood Year 2015 (BY15)***

By the end of the month there were 2,271,478 BY 15 SCS fry in 16 raceways. Fry averaged 163FPP (fish per pound). Mortality remained high throughout August. Mortality varied throughout the population from 0.5%-11.0%. Fish health found the fungus *Phoma herbarum* as the cause of the mortality. This disease leaves a fungus mat between the air bladder and the kidney. *Phoma* is not contagious but there is no known treatment for it. The SCS were also found to have the parasites *Sanguinicola* and *Epitheliocystis*. The hatchery crew is sweeping all 16 ponds from stem to stern on Mondays and Thursdays, and daily scrubbing screens (head and tail). Fish marking will begin Early September beginning with the ponds with the lightest *Phoma* present. There are four distinct PBT groups for BY 15 fry: Dworshak smolt production (1.7 M end of month), NPTHC Parr (188K end of month), NPTHC Lolo (140K end of month), and Selway Parr (290K end of month).

Brood Year 2016 (BY16)

Spawning began in August with three egg take occurring during the month. 503 females were spawned with 371 producing 1.98 million green eggs for incubation.

Coho Salmon (COS)***Brood Year 2015 (BY 15)***

Nothing Reported for August. At the end of July there were 345,226 Umatilla, Kalama, Irrigon, and Clearwater stock Coho fry in 37 tanks set into modified Burrow's ponds in System 3. Fry averaged 583 fpp and mortality averaged 18.0%.

Dworshak Stock- Summer Steelhead (SST)***Brood Year 2016 (BY 16)***

Inventory and marking BY 16 SST outside to System 1 Burrow's Ponds (BPs) was completed early August. Take 10 remained in the Nursery and was split into 16 additional tanks to keep density in check.

Once fry are marked and moved outside they remain on reservoir water until they are a minimum of 60 FPP. Take 7 reached that mark in August and were split into Burrow's ponds in System 1 & 2, where they will remain until release next spring.

At the end of August there were 2,186,438 fry from takes 1-9 in System 1, 2, & 3 averaging 24 fpp; 309,363 fry in the Nursery from take 10 averaging 78 fpp. Mortality in the Systems was 0.20%, and was 0.06% in the nursery.

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Credit: Olson, FWS

Spawning began in August with three egg takes occurring during the month.



Credit: Olson, FWS

Harvesting milt from adult male steelhead.



Credit: Olson, FWS

Stripping eggs from a spring Chinook salmon.

Dworshak Hatchery Production

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SUMMARY

Table 1. Total Production - Fish on Station (8/31/16).

SP	BY	Location	Number	Wt (lbs)	FPP	L in	L mm
SCS BY 15	15	Raceways	2,271,478	13,910	163	2.7	69
COS BY 15	15	System III	345,226	643	537	1.7	44
SST BY 16	16	Nursery	309,363	4,003	77	3.3	84
SST BY 16	16	Systems	2,186,438	71,742	30	4.7	119
Total Fish/Fry on Station EOM			5,112,505	90,298			

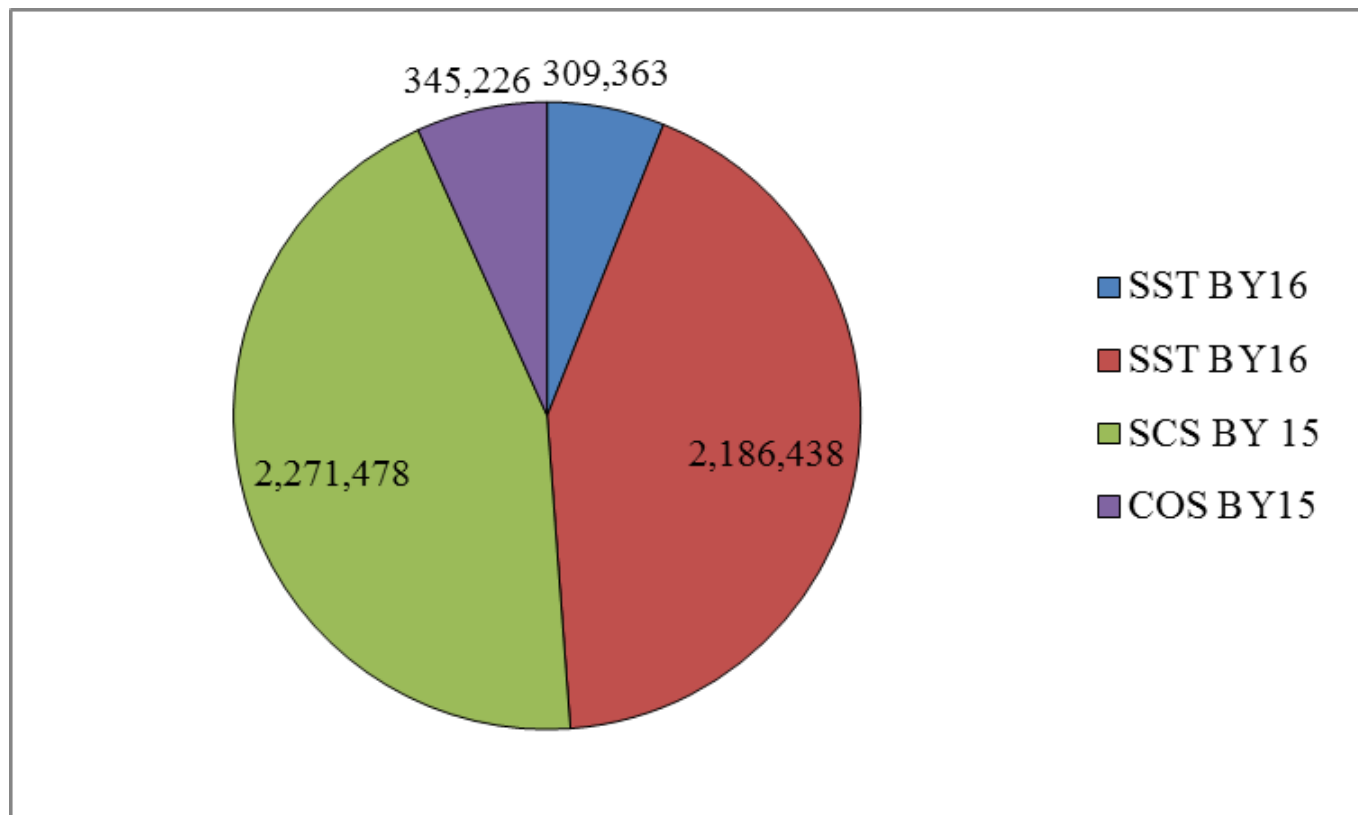


Figure 1. August 31, 2016 Total Fish/Eggs on Station.

Dworshak NFH Meetings, Training and Conferences - Drobish

On August 24th, Tony Snodderly, Regional Director for Senator Mike Crapo, Lewiston, Idaho and Andrew Earl, Legislative Aide for Senator Mike Crapo, Washington D.C. visited the Dworshak Fisheries Complex. Tony and Andrew met with Steve Rodgers and Mark Drobish and discussed operations, joint-management, challenges/opportunities at the Dworshak Fish Hatchery and toured the facility. Tony and Andrew also toured the Dworshak Dam Project following their visit at the Dworshak Fisheries Complex.

On August 24th, Hatchery staff and Mike Bisbee, Coho Project Leader met with "JETCO" to discuss the design and potential installation of a slide gate for System III to provide additional water control facilitating cleaning operations for Coho Salmon production.



Credit: Olson, FWS

Dworshak NFC Electrician James Oatman trouble shoots water alarm system.

DNFH Maintenance and Operations Activity Report - Koehler

- Digesters that were pressure washed in July have been primed and painted.
- A new PLC has replaced the Computer that operated the hatchery alarm system. Electricians are working out the kinks and it should be completed early next month.
- The three empty quarters are being gone through and needed repairs completed. All empty units have been painted, carpets cleaned and landscaping cleaned up.
- System one clarifiers have been scraped and cleaned and the solids transferred to the digesters.
- Maintenance is working on the formalin treatment building for adult holding ponds.



Credit: Olson, FWS

Electrical upgrades require wiring modifications for Dworshak's new water alarm system.

Maintenance has completed 38 Preventative Maintenance work orders and 12 written requests for the month of August..

Idaho Fish and Wildlife Conservation Office - Connor (for Project Leader)

Project Leader

Doug Nemeth came aboard as our new project leader.

Applied for Smart Card.

Lent a hand during spring Chinook spawning.

Dworshak Complex Monitoring and Evaluation Team

Measured coded-wire tag retentions for BY2016 steelhead.

Assisted with sorting of spring Chinook salmon at Kooskia NFH and entered the data into FINS.

Participated in a spring Chinook salmon spawning coordination meeting.

Worked on the PRAS evaluation report.

Participated in the weekly spring Chinook salmon coordination call and RO FAC call.

FONs funding was requested for the final year of the Hagerman PRAS evaluation.

Participated in the sorting and spawning of spring Chinook salmon at Dworshak NFH.

Attended FINS training in Boise.

Chris Peery moved on to work for the U. S. Army Corps of Engineers in Walla Walla.

Aquatic Conservation Team

Sampled and preserved fish specimens for the NCTC fish collection.

Assisted the Panhandle NF with stream/water quality assessments.

Completed FIS fish passage reporting.

Cast animal tracks for outreach events.

Participated in the project leaders and Western Lamprey team calls.

Listened in on Freshwater Mussel management webinar.

Compiled information for NCTC YIGO Monarch project report.

Conducted field work in Bonners Ferry.

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Idaho Fish and Wildlife Conservation Office

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Fall Chinook Salmon Research Team

Completed the first version of a literature review on immigration and spawning behavior.

Developed a model for estimating energy expenditure and mortality of adults during immigration and spawning.

Revised the manuscript entitled "Testing unmanned aircraft systems (UASs) for salmon spawning surveys," which was accepted for publication in the new Canadian online journal FACETS.

Worked on the 2016 seining database.

Assisted during the collection of specimens for NCTC.

Estimated temperature-related embryo mortality.

Completed a review on the Northern Pikeminnow management program.

Coordinated with the Idaho Power Company, Nez Perce Tribe Department of Fisheries Resources Management, U.S. Geological Survey, and Washington Department of Fish and Wildlife.

Provided staff of the Mountain Whitefish project with field assistance.

Analyzed redd count data.

Worked on a module that is part of the AMIP model.

Reviewed a manuscript for Transactions of the American Fisheries Society.

Initiated an investigation of alternative survey sampling methods UAS application.

Conducted a series of analyses for the Dworshak Monitoring and Evaluation Team.

Took care of FIS reporting in the absence of the responsible individuals.



Credit: FWS File Photo

Sorting fish that have come in the ladder from the Clearwater River.



Credit: Olson, FWS

Volunteer Rodger checks spring Chinook salmon female for ripeness.



Credit: Olson, FWS

Ray Jones from IFWCO monitoring juvenile fish growth.

Idaho Fish Health Center - Blair**August 2016****Dworshak NFH**

Steelhead juveniles: System 1 and System 3 steelhead were examined for monthly monitoring and no external parasites were found; fish appeared to be healthy.

System 2 steelhead were examined on Aug. 22. Fish appeared healthy at this time although an accumulation of uneaten feed on the bottom of the pond was noted and recommendations were made to adjust demand feeders appropriately.

Take 10 steelhead are still in the nursery and will remain there until they are 60 fpp. Mortality is very low and fish look good.

Spring Chinook juveniles: Dworshak spring Chinook were examined on Aug. 4, 15, and 30 due to large increases in mortality. Fish health found fungal mats internally, between the kidney and swim bladder of the fish, due to the fungus *Phoma herbarum*. There is no treatment for *Phoma*, so recommendations were made to remove sick fish from the tail end of the raceways and to continue to take care in feeding and keeping raceways clean for the surviving fish.

Spring Chinook Broodstock: Fish health samples were taken at three different spawn days in August for spring Chinook broodstock for Dworshak and Kooskia stocks.

Coho juveniles: Coho are still in the smaller tanks and are expected to be moved to the burrow ponds mid-September. There is a large variation in size. Fish examined appeared to be in good health.

Kooskia NFH

Spring Chinook juveniles: Kooskia spring Chinook were examined on Aug. 19 and 26 due to reported flashing by Kooskia production. Low levels of *Ichthyophthirius multifiliis* were seen on the gills and skin. Recommendations were to treat with formalin once per week for the external parasite until water temperatures reduce significantly.

Volunteers provide much needed help during the spring Chinook spawning season.



Credit: Olson, FWS

Rodger Meyers helps sort adult fish at the table.



Credit: Olson, FWS

Volunteer Mattie rinses female adults for spawning.

Kooskia National Fish Hatchery - Hills

This activity report is implemented by the Tribal Fish Hatchery Manager, Kent Hills. All information in this report was collected and or performed by the hatchery staff during the preceding month.

Under SRBA and the Clearwater Annual Operating Plan, the Tribe, Service and Idaho Fish & Game have agreed to implement other fish production actions related to KNFH mitigation. Reports will include additional information about other species reared, processed and released in relation to KNFH operations.

Kooskia Chinook Brood Year 2015

There are 693,418 fry on station; we have had mortality this month of 212. They are on well water at 51 degrees. The fish are an average of 3.94 inches (100 mm) long and 54.4 fish per pound. Total feed used this month was 4,400.5 pounds. Fish were seen flashing this month. Kenny contacted the Idaho Fish Health Center and Marilyn Blair evaluated the fish and found Ich and all hatchery ponds were treated at 50ppm over 8-12 hours. Continue to treat once per week until water temperatures drop or flashing subsides.

Kooskia Chinook Brood Year 2016

266 adult females and 203 males were spawned all eggs were fertilized and then placed in coolers and transported back to the Kooskia Hatchery for incubation. Total eggs in three takes, 1,001,224 green eggs were transported to Kooskia Hatchery for incubation. All eggs will be formalin treated twice a week to inhibit fungal growth in the incubation trays.

The remaining adults are to be spawned for Clearwater Hatchery.

Kooskia Adult Trap Operations:

The trap was open from August 28 thru August 31. 152 Chinook were taken from the trap, 77 were hatchery males, 62 were hatchery females, 6 were hatchery jacks, 6 were wild females and 1 was a wild male. All were released into Clear Creek nine miles up at the second bridge.

Maintenance & Operations:

Aug 01: US Park Service continued installing the new fencing around the Looking Glass viewing area, this is continuation of last year.

Aug 02: Staff lowered both Obermeyer weirs at the intake, cleaning the screen chamber and trap.

Aug 04: Gerry met with personnel from Burton Construction concerning the bid for the new O2 generator building.

Aug 05: Staff began painting the new steel doors and frames for the office.

Aug 09: Had a low well water alarm at 11:10 a. m. Upon investigation it was determined well number 1 had quit working, Gerry went to the well head, turned it off then back on which cleared a blockage at well intake. We have had this issue before and had the well worked on to prevent this, however, after a time there is alkali build up in the well which gets stuck against the intake screen.

Aug 11: Gerry started the incubation chiller in preparation for the arrival of eggs next week.

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Kooskia NFH - Hills

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Maintenance & Operations (continued):

- Aug 15:** Kent, Carter and the two interns went to Dworshak to assist in spawning Dworshak and Kooskia fish.
- Aug 15:** David Evetts from USGS and two others arrived at the hatchery to locate another place to put their data gathering equipment. When we opened the weirs at the intake, it left their equipment out of the water. It was determined they would put it about 100 yards above the weir and attached it to a cable ran across Clear Creek. After leaving the hatchery they were going to contact Paul McConnell, the land owner to advise him and gain his permission.
- Aug 15:** Gerry repaired a leak in the piping of the incubation system.
- Aug 16:** Spawning Kooskia fish at Dworshak, 21 females, 18 males and 1 jack were spawned, 79,044 green eggs were returned to Kooskia and placed in incubation trays.
- Aug 17:** Staff noticed flashing in the BY15 fish, it was decided to do a formalin treatment to combat the parasites, Fish Health was notified and have agreed to come to the hatchery on Friday to inspect the fish, it will be determined then if further treatment is required.
- Aug 19:** Two pine trees were cut down in an attempt to clear a visual path from the domestic cistern to the domestic well so the automatic run switch will function.
- Aug 23:** Kent and Carter to Dworshak to assist with spawning of Dworshak fish.
- Aug 24:** Kent, Carter & Kenny to Dworshak for spawning. A total of 105 females were spawned, 88 males were used. 395,220 green eggs were returned to Kooskia Hatchery for incubation.
- Aug 25:** Kent & Gerry to Lapwai to interview applicants for the Tech II position at Kooskia Hatchery.
- Aug 26:** Senator Mike Crapo's staff and other dignitaries arrived for a tour of the hatchery and discuss the logging issues in the Clear Creek drainage.
- Aug 27:** Due to a large amount of adult Salmon gathering in Clear Creek, the Trap was opened and 80 adult Chinook removed from the trap 44 were hatchery males, 30 were hatchery females, 2 hatchery jacks and 4 wild males, all were released into Clear Creek at the second bridge.
- Aug 29:** A total of 43 adult Chinook were removed from the trap. 23 were hatchery males, 16 were hatchery females, 3 were hatchery jacks and 1 was a wild female, all were released into Clear Creek at the second bridge for natural spawning.
- Aug 30:** Kenny, Carter and Kent went to Dworshak for spawning. 140 females and 97 males were spawned, there was 1 green kill female and 1 BKD cull. An estimated 526,960 green eggs from Take 3 were transported to Kooskia Hatchery and placed in incubation trays.
- Aug 31:** Kent and Carter went to Dworshak to assist in spawning females for Dworshak and the Clearwater Hatchery.
- Aug 31:** Carrier personnel arrived at the hatchery to service the chiller.
- Aug 31:** A total of 29 adult Chinook were removed from the trap, 10 were hatchery males, 16 were hatchery females, 1 hatchery jack and 2 wild males, all fish were released into Clear Creek at the second bridge for natural spawning.

Kooskia NFH Training and conferences:

Kent attended a spawning meeting at Dworshak Hatchery on the 4th.

Kent attended a 401k subcommittee meeting.

Kent attended a 401k meeting.

Information and Education

Dworshak - Jill Olson

Facebook: Reach - 2,676; Engagements - 483 **Website:** Page Loads - 13; Unique - 11; First Time - 9; Returning - 2

Visitors: We received 219 visitors from 14 states, Germany, and Taiwan. **Tours:** We hosted five tours including distinguished guests from Bonneville Power Authority, the Public Power Council, two representatives from Senator Crapo's office, and an international group of students lead by their professor from National Chiayi University in Taiwan

Outreach: We had no outreach activities in the month of August.

Volunteer Hours: Volunteers contributed a total of 185.75 hours during the month of August. The majority of their hours were acquired during spawning activities.

Kooskia - Kent Hills

Visitors: There were 257 visitors to the hatchery during this month; this figure is compiled by staff.



Credit: Olson, FWS

Let's Go Outside!

Experience Nature

http://www.fws.gov/pacific/experience_nature/

Staff List

Dworshak Fisheries Complex Management:

Steve Rodgers, Dworshak Fisheries Complex Manager

Mark Drobish, Dworshak NFH Manager

Adam Izbicki (FWS) & Jeremy Sommer (NPT)

Dworshak NFH Assistant Hatchery Managers

Mike Tuell, SRBA Coordinator

Scott Koehler, Dworshak NFH Maintenance Supervisor

Doug Nemeth, Project Leader, Idaho Fish and Wildlife Conservation Office

Mike Faler, Aquatic Conservation Lead

Dr. William Conner, Fall Chinook Research Lead

Kent Hills, Kooskia NFH Manager

Gerry Fogelman, Kooskia NFH Maintenance Supervisor

Dworshak NFH Production: Angela Feldmann, Tom Tighe, Rob Bohn, Wayne Hamilton, Mike Bisbee, Tui Moliga, Steve Coomer, Carter Lopez, Zach Broncheau, Jayden Hudson, Steve Jeffers, Jayson Thompson, Aidan Frye

Administration: Heather Leopard- Administrative Officer, Brian Devlin- Budget Technician

Dworshak NFH Maintenance:

Terry Weeks, Rick King, Rob Kellar, James Oatman, James Paddelty, Melissa Wright

Idaho Fish and Wildlife Conservation Office:

Ray Jones, Aaron Garcia, Carrie Bretz, Frank Mullins, Jody Brostrom, Chris Griffith

Complex Information and Education: Jill Olson

Kooskia NFH: Kenny Simpson,